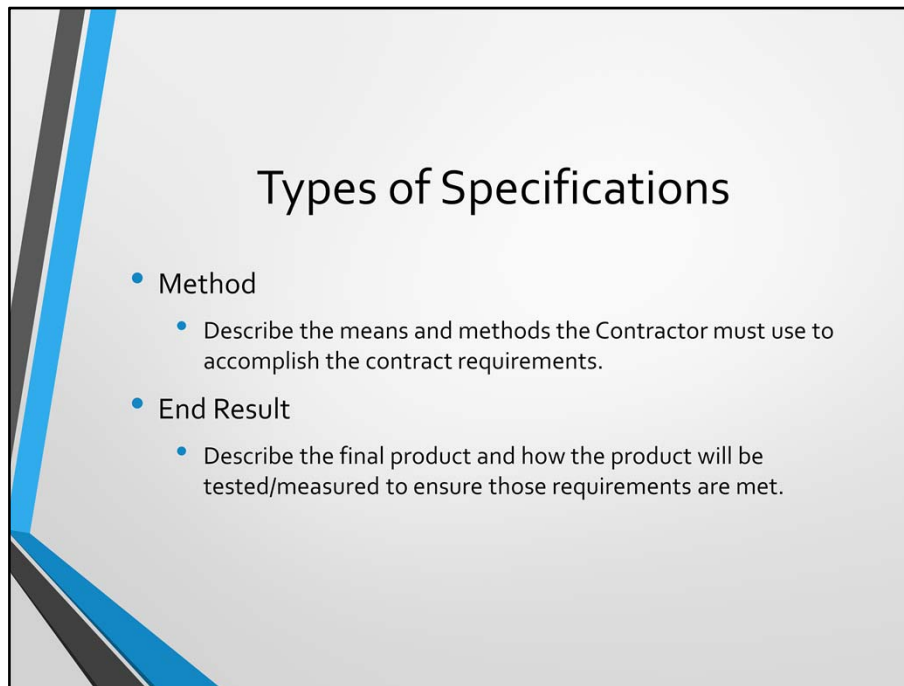




## What is a Specification?

- Highway construction specifications are the written requirements associated with a contract. They are intended to clearly communicate the work requirements and assign the roles, responsibilities, and risks associated with the work. In Department contracts, these are incorporated into contracts as:
  - Special Provisions (Project Specific and Standard)
  - Supplemental Specifications
  - Standard Specifications
  - Detailed Drawings



Basically 2 types...

Pick End Result! There is a place for Method but it not used very often.

End result specs allow the Contractor to choose the most efficient method for their operation to accomplish the work. End result specs are usually desirable as they lessen the risk to the Department. It is common for project specifications to be one or a combination of the two.

Method. Sometimes just no other way to do it. Trying to fix a problem.

## Standard Specifications

- Apply to all contracts let by the Department through Contract Plans.
- MDT Internet > Doing Business > Contracting and Bidding > Standard Specifications (Down at the bottom under Reference Materials)
  - [http://www.mdt.mt.gov/business/contracting/standard\\_specs.shtml](http://www.mdt.mt.gov/business/contracting/standard_specs.shtml)

These get incorporated into all contracts, you do not have to do anything. There is no reason to say “Install sidewalk in accordance with Section 608.”

## Supplemental Specifications

- Revisions made since the time of the original publication of the standard specifications.
- MDT Internet > Doing Business > Contracting and Bidding > Standard Specifications (Down at the bottom under Reference Materials)
  - [http://www.mdt.mt.gov/other/webdata/external/const/specifications/2014/2014\\_supplemental\\_specs/](http://www.mdt.mt.gov/other/webdata/external/const/specifications/2014/2014_supplemental_specs/)

It is important to refer to the supplemental specifications printed as part of the contract when determining applicability. Contractors are only held to the agreements made at the time of the contract letting. (more than one is posted)

If you think a Standard or Supplemental needs to be updated, call me.



Project Specific Special Provision

- Developed by the design team and apply to some unique feature or process associated to the project.
- Do I need this?

Prior to writing/including project specific special provisions, verify that standard specifications, supplementals or standard specials do not cover the intended work.

## Standard Special Provisions

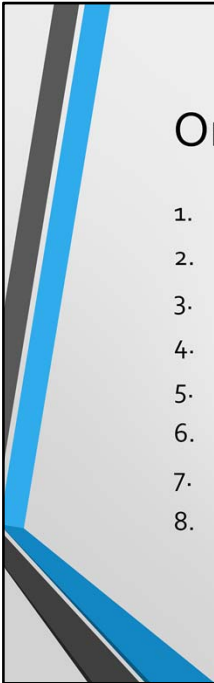
- Specifications that have been developed to uniformly address unique features or modifications to Department specifications.
- Repository for frequently used special provisions so project specific specials do not need to be developed for each project.
- MDT Internet > Doing Business > Contracting and Bidding > Special Provisions (Down at the bottom under Reference Materials)
  - [http://www.mdt.mt.gov/business/contracting/special\\_provisions.shtml](http://www.mdt.mt.gov/business/contracting/special_provisions.shtml)

Plant Mix is a good example. Long time Special, then rolled into the specifications.

There are some standard special provisions that require slight modifications for each project. These are marked with an “M” in the binder.

Often times, standard special provisions have been developed to address situations needing immediate attention and are incorporated into supplemental specifications once the “kinks” are worked out a static format addressing both Department and Contractor concerns is in place. Also don’t have to make the same mistakes on different projects, if we use a standard that gets updated. When you make something a standard, you don’t have a bunch of different version of it floating around.

If you are writing the same thing over and over. Let’s make it a standard. This is what I do.

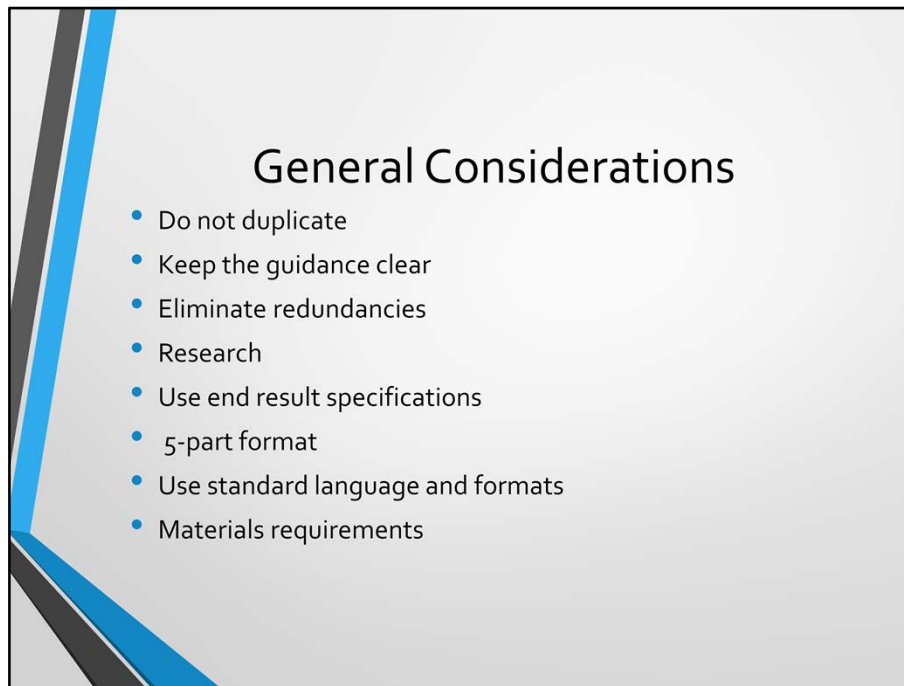


## Order of Precedence (§105.04)

1. "Question and Answer Forum" Information
2. Special Provisions
3. Table of Contractor Submittals
4. Plans
5. Supplemental Specifications
6. Standard Specifications
7. Supplemental Detailed Drawings
8. Detailed Drawings

All these things apply when writing Q&A responses too (and plan notes)





Prior to writing Specs. (including Q&A Forum postings):

Do not duplicate information sufficiently covered by other contract documents.

Keep the guidance clear by writing specifications in the active voice using the imperative mood. Imperative Mood – Forms commands or requests (Please be quiet)

Eliminate redundancies, ambiguities, conflicts, circular references, and obsolete provisions. (ASTM Methods) (Read through everything – Deck Treatment vs Sequencing)

Research the subject adequately by communicating with industry and the Department's personnel to ensure specifications reflect current practices. Other states specifications can be a good resource when doing this research.

Use end result specifications whenever possible. (First choice)

Follow the standard 5-part format (Description, Materials, Construction, Measurement, and Payment) to ensure clear and uniform dissemination of information. (More later)

Use standard language and formats whenever possible to promote consistent

interpretations by both Contractors and Department personnel.

Do not change materials requirements of standard items. Do not include obsolete materials test methods or test methods the Department cannot perform. (We can cite these but we can't say we'll test it, accept on a cert)

# Specification Layout

- Division 100 – General Provisions
- Division 200 – Earthwork
- Division 300 – Aggregate Surfacing and Base Courses
- Division 400 – Bituminous Pavements
- Division 500 – Rigid Pavements and Structures
- Division 600 – Miscellaneous Construction
- Division 700 – Materials

(Division)

(Section)

(Subsection)

(Subsection)

(Part)

(Part)

(Number)

**DIVISION 200 - EARTHWORK**

**SECTION 203**

**EXCAVATION AND EMBANKMENT**

**203.01 DESCRIPTION**  
This work is the excavation, placing, compacting and

**203.01.1 Excavation**  
A. Unclassified Excavation. Unclassified excavation

B. Borrow Excavation.

1. Unclassified Borrow. Unclassified borrow for

2. Special Borrow. Special borrow is

Reference: Subsection 203.01.1(B)(1)

## Divisions:

These are the broad categories of work involved in construction. These are set up on the federal level and each state uses very similar systems to aid uniformity across the country. Our specifications employ the following divisions:

## Sections:

These are more detailed portions of the Divisions which address the specific scope of work.

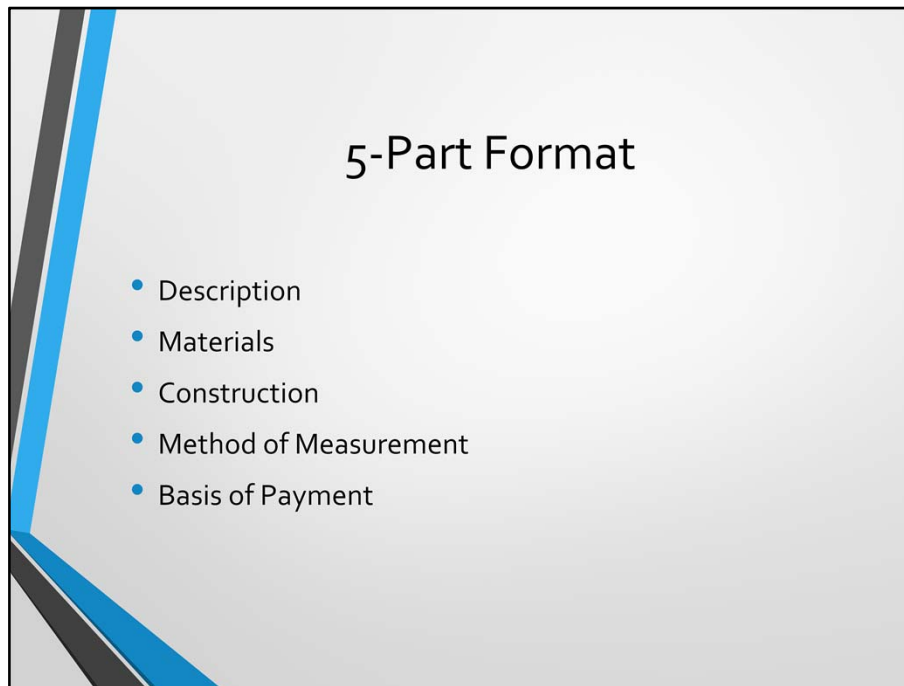
## Subsections:

These are specifics concerning what the work in each subsection requires. The standard spec book follows the 5-part format as defined below.

## Parts & Numbers:

These are used to keep the information associated with each Subsection formatted in a clear manner.

When referencing, you can just say Subsection 203.01.1(B)(1)



**Description:** This provides a general overview of what the specification will discuss.

**Materials:** This describes the physical requirements of the materials used. It is not uncommon for this subsection to reference other areas of the specifications or test methods. This is a critical part of the specification as it ensures quality materials are furnished.

**Construction:** This describes the placement of materials and other associated operations at the job site. It can often be difficult to draw the line between the materials subsection requirements and the construction subsection requirements. A good rule of thumb is to consider when the material reaches the job site. Prior to any material reaching the job site, list specific requirements under the materials subsection. List all requirements after materials have reached the job site, in the construction subsection.

**Method of Measurement:** This describes the method that will be used to measure the work performed. It is essential to consider what will be required by field personnel to properly track the payments of items. If similar items exist, it is recommended that both items be measured in a similar fashion to promote uniformity among similar items. (Geotextile)

**Basis of Payment:** These subsections outline the pay items and pay units that are used to

pay for the work. These are critical to both the Department and the Contractors as it identifies what bid items address the specific aspects of the work. Research and determine if there are available pay items for the work.

OK to combine MOM and BOP



ASTM/AASHTO Products and Materials. Subscriptions. AASHTO – As long as you're on an MDT computer, you're fine. ASTM – need a user name and password. Cookies.

Discuss any test methods cited with the Materials Bureau to determine how/if the Department can test/accept the material. We don't have to test everything but don't say we will if we can't. Accept on a cert.

QPL, FHWA Agreement, SiteManager

Write a end result specification if at all possible. Listing products (Minimum 3) is acceptable but not necessary. We can still write a generic spec even if we don't know of multiple manufacturers.

# Basis of Payment

- Incidental Items
- Bid items
- Miscellaneous Items

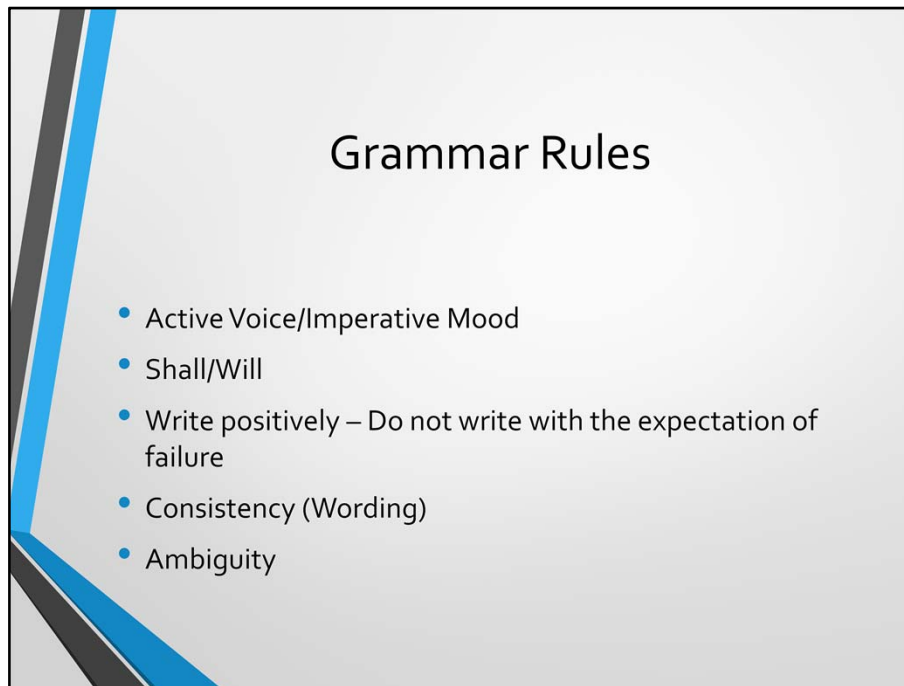
1040300037	MISCELLANEOUS ITEMS-SQYD	SQYD
1040300040	MISCELLANEOUS ITEMS-SGFT	SGFT
1040300045	MISCELLANEOUS ITEMS-EACH	EACH
1040300050	MISCELLANEOUS ITEMS-TON	TON
1040300055	MISCELLANEOUS ITEMS-DAY	DAY
1040300060	MISCELLANEOUS ITEMS-CUYD	CUYD
1040300065	MISCELLANEOUS ITEMS-LNFT	LNFT
1040300067	MISCELLANEOUS ITEMS-ACRE	ACRE

When including items of work for payment with other items, specify specific items. Do not include items in “other work” or “incidental” to the work, unless the work is a general project requirement (e.g. sequencing). Do not include items together that are unrelated.

Don’t say at contractor expense it at no cost. Not true, we’re paying for it. We want to know where the cost is at.

Avoid the creation of unnecessary items, or items that are too specific (A-2000).  
Don’t assume there isn't a bid item for something (Pipe).

When you include items in the cost of something else, it skews the bid history.

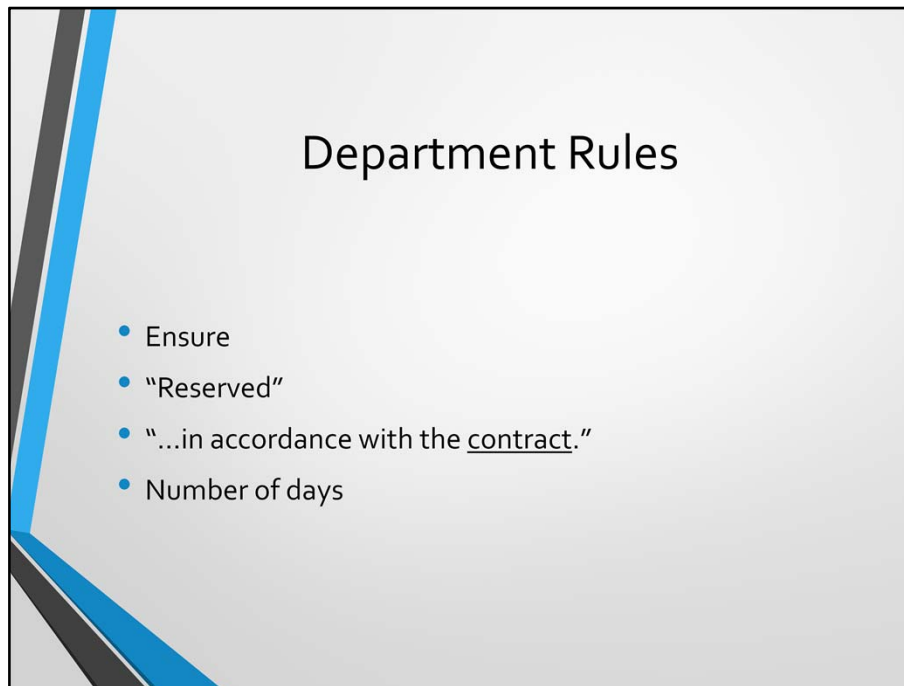


Talk to the Contractor. Direct them.

Will means the Department is responsible.

Seal and Cover vs Seal Coat

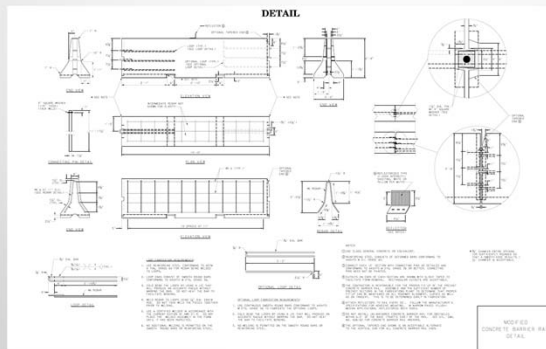




Also talk about enforceable in here. Not everything needs a penalty but it has to be quantifiable and measurable.

## Is all this necessary?

- Maybe
- Only change what needs to be changed.



One line/paragraph specials are fine. Whole special re-describing a product just to change the color. Tie this to measurable (what shade of yellow).

Same is true for Detailed Drawings. Barrier Rail Detail

Change the material specs for a product, the construction/MOM/BOP still applies.



## Help


- FHWA Spec Search
  - <http://www.specs.fhwa.dot.gov/nhswp/>
- Other States
- Manufacturers
- Call me:
  - Randy Boysen 444-0464
  - John MacMillan 444-0852
  - Steve McEvoy 444-6295
  - [mdtspecifications@mt.gov](mailto:mdtspecifications@mt.gov)

Be careful with manufacturers (scrub seal)

## Style Guide

- Lots of other information
- MDT Internet > Doing Business > Contracting & Bidding > Manuals > Specification Style Guide (Down at the bottom under Reference Materials)
  - [http://www.mdt.mt.gov/other/webdata/external/const/manuals\\_guidelines/SPEC\\_STYLE\\_GUIDE.pdf](http://www.mdt.mt.gov/other/webdata/external/const/manuals_guidelines/SPEC_STYLE_GUIDE.pdf)

We'll come back to this if we get through the special formatting part



If you have to read it twice to  
understand it, rewrite it.

# Formatting

- Special Provision Template
  - MDT Internet > Doing Business > Design Consulting > Special Provisions > Template & Instructions > Special Provisions Template
  - [http://www.mdt.mt.gov/other/webdata/external/contractplans/forms/\\_SPECIALS-BLANK.DOTM](http://www.mdt.mt.gov/other/webdata/external/contractplans/forms/_SPECIALS-BLANK.DOTM)